



“What Secrets Lie Beneath?”

LAB CRAWL 2008

CORE SAMPLE ACTIVITY #1

Summer 2008



Map of Antarctica
©National Maritime Museum

There is a general relationship between the depth of a layer of material in a core sample and the age of that material. This activity is designed to highlight that relationship by relating distance measurements in a core to a geological time in the past.

To construct Core A:
1. place a layer approx. 3 cm deep into the bottom of an empty Play-doh container that has been lined with plastic wrap.

2. After pressing the first layer down into the container as firmly as

Core Sample Activity #1

possible, add a second layer of a different color, but approx. the same thickness. Press down firmly, especially along the outside edge.

3. Continue that process for a core with a total of four, different colored layers.

Sample A

Processing Directions:

When samples are ready, remove them from the container and use a thin piece of wire to slice them in half vertically. Each student group will receive one half of pre-made core sample A. Students are to make 3 measurements of each layer (left, middle, right). ALL measurements are to be taken from the top of the core down to the bottom of the colored layer. When all 3 measurements are on the data table, have

students find the average distance to the bottom of the layer. Using the AVERAGE distance, measure and draw the layer in the box provided .

Below the data table, is a box where the core sample is to be drawn. To the left of that pictorial data, students are to set up a geological time scale. This time scale will be used to answer some general questions that illustrate the relationship between layer depth and geological age.

Time Scale Directions:

Next to the box containing the core picture is a line labeled SCALE. The top of the line is an arrow representing today, going farther backwards in time as you progress down the line. Students are to create the scale using the following information :

1 mm = 5 million years

MATERIALS

- PRE-MADE PLAY-DOH CORE SAMPLES
- WIRE
- RULERS
- WORKSHEETS

S.S.S. Science Addressed:

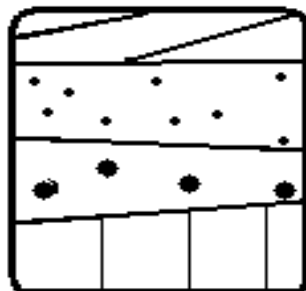
SC.A.1.3

SC.D.1.3
2.3

SC.G.1.3
2.3

SC.H.1.3
2.3
3.3

CORE A
four different colors
NO fossils



STUDENT ACTIVITY

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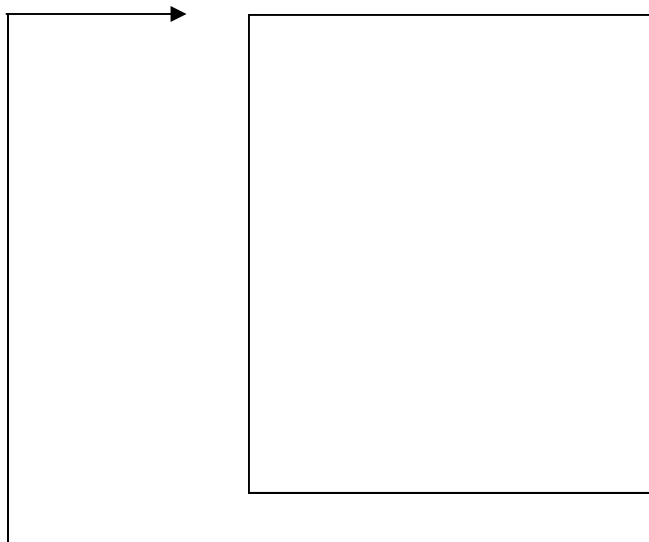
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Core Layer Data:

Sample A Layered Rock	Left side (mm)	Middle (mm)	Right side (mm)	Average (mm)
Color 1:				
Color 2:				
Color 3:				
Color 4:				

SCALE

CORE SAMPLE A



Conclusion Questions:

1. How many years ago did the 2nd layer from the top begin to form?
2. How many years did it take to form the 2nd layer?
3. If your core had been removed from the ground 150 million years ago, how would it be different from the core you actually examined?